



METHOD AND SYSTEM FOR DISTRIBUTING
AN INVENTION DISCLOSURE OVER AN INTRANET

Related Applications

This application is based upon prior filed
copending provisional application Serial No. 60/141,306
filed June 28, 1999, and copending provisional
5 application Serial No. 60/146,254 filed July 29, 1999,
the entire contents of each of which are incorporated
herein by reference.

Field of the Invention

The present invention relates to the field of
10 data processing, and, more particularly, to a method
and system for processing an invention disclosure.

Background of the Invention

Traditional patent review processes within
large companies initially requires an inventor to mail
15 a paper copy of an invention disclosure to the
intellectual property (IP) department. Upon receipt of
the invention disclosure, an IP administrator assigns a
disclosure number and forwards a copy of the invention
disclosure to an evaluation committee. Members of the
20 evaluation committee vary depending on the technical or
functional subject matter of the invention. A
recommendation by the evaluation committee is then
mailed back to the IP administrator.

The recommendation typically includes one of the following: perform a patent search, publish, close, or protect as a trade secret. As an alternative, the recommendation can bypass the patent search and go
5 directly into a recommendation of preparing and filing of a patent application.

The above described process is labor intensive. That is, all correspondence between the inventors, the intellectual property department, the
10 evaluators, and other necessary parties are self initiated. Since the primary coordinator for the invention disclosure process is typically the IP administrator, much of the effort in distributing this information is placed upon this person. The IP
15 administrator must assign the disclosure number, send out notification letters to applicable individuals that an invention disclosure has been submitted, and track the entire overall process from start to finish, which can be a time consuming task.

Attempts have been made to automate an invention disclosure process. For instance, U.S. Patent No. 5,377,355 to Hager et al. discloses an automation of procedures in a local area network (LAN) environment. The procedures are automated in a data
25 processing system with regard to the disclosures stored therein. Another example of automating the invention disclosure process in a local area network (LAN) environment is disclosed in U.S. Patent No. 5,276,869 to Forrest et al. A selective review and electronic
30 corroboration of invention disclosures within a distributed data processing system are disclosed.

Yet another method of an automated invention disclosure process is a program that operates on a mainframe computer. The program includes a set of
35 virtual machine programs that operate on the mainframe for automating the invention disclosure process. These programs include a first program for inventors, a

second program for the intellectual property department, and a third program for the review committees. The first program allows inventors to create invention disclosures on-line and submit the disclosure to the intellectual property department. The second program automatically assigns the next disclosure number, assigns a functional area and attorney, and sends the information disclosure to a predetermined list of committee members. The third program allows review committee members to view and print the invention disclosure. After the committee members have read the invention disclosure, members vote on the disclosure and the third program sends an electronic ballot to the chairperson of the committee.

Unfortunately, this program is cumbersome and difficult to follow. All text to be included in the invention disclosure must be entered directly into the system. Moreover, entry of text requires the user to know a prescribed set of coded instructions, which is not user friendly for someone unfamiliar with the instruction codes. Furthermore, a charge is incurred to the program or functional area based upon the input/output usage initiated by the user in that particular area.

Despite the development of these invention disclosure processes, there is still a need for a user friendly invention disclosure process that automatically distributes electronic documents within a data processing system.

Summary of the Invention

In view of the foregoing background, it is therefore an object of the present invention to provide a method and associated system that improves the distribution of electronic documents within a data processing system.

5 This and other advantages, features and
objects in accordance with the present invention are
provided by a method for distributing an invention
disclosure over an intranet. The method preferably
10 includes the steps of creating and submitting an
invention disclosure over the intranet, with the
invention disclosure being submitted by an inventor to
at least one evaluator via e-mail with a hyperlink to
the invention disclosure, and transmitting evaluation
15 comments of the invention disclosure by at least one
evaluator via e-mail. The e-mail messages are easily
transmitted and received between users within the
intranet for providing notification and status of the
invention disclosure. In addition, the hyperlinks
20 embedded within selected e-mail messages allows a user
to access the invention disclosure to provide a user
friendly and efficient method of distributing an
invention disclosure within an organization or company.

25 The intranet includes a plurality of users
enrolled therein with each user having associated
personnel information stored within the intranet, and
the method also preferably includes the steps of
creating a profile of the invention disclosure based
upon a technical area relating to the invention
disclosure in response to accessing associated
personnel information of the inventor, and transmitting
a first notification message via e-mail to a first
group of users based upon the created profile. The
first group of users are within the plurality of users
30 and includes a technical review coordinator. The first
notification message preferably has a hyperlink to the
invention disclosure.

35 At least one evaluator is selected by the
technical review coordinator. The method preferably
includes the steps of submitting a recommendation of
the invention disclosure by the technical review
coordinator based upon the evaluation comments, and

transmitting the recommendation of the invention disclosure via e-mail to the first group of users.

The step of transmitting the first notification message is responsive to submission of the invention disclosure. The profile preferably includes a functional manager of the inventor, a patent attorney, a technical review person, and a contracts person if the invention was developed under a government contract. Similarly, the first group of users preferably includes a technical review coordinator, a contract administrator if the invention was developed under a government contract, and an intellectual property administrator.

Another aspect of the present invention relates to an intranet for distributing an invention disclosure that includes a first software module for creating and submitting an invention disclosure over the intranet, with the invention disclosure being submitted by an inventor to at least one evaluator via e-mail with a hyperlink to the invention disclosure, and a second software module for transmitting evaluation comments of the invention disclosure by the at least one evaluator via e-mail.

The intranet includes a plurality of users enrolled therein with each user having associated personnel information stored within the intranet. The intranet also preferably includes a third software module for creating a profile of the invention disclosure based upon a technical area relating to the invention disclosure in response to accessing associated personnel information of the inventor, and a fourth software module for transmitting a first notification message via e-mail to a first group of users based upon the created profile. The first group of users are within the plurality of users and includes a technical review coordinator. The first notification

message preferably includes a hyperlink to the invention disclosure.

The at least one evaluator is selected by the technical review coordinator. The intranet further preferably includes a fifth software module for submitting a recommendation of the invention disclosure by the technical review coordinator based upon the evaluation comments, and a sixth software module for transmitting the recommendation of the invention disclosure via e-mail to the first group of users.

Brief Description of the Drawings

FIG. 1 is a schematic diagram of an intranet system used to implement an invention disclosure process in accordance with the present invention.

FIG. 2 is a high level flow chart illustrating how an invention disclosure is created and evaluated over an intranet in accordance with the present invention.

FIGS. 3-45 are user interface displays for the invention disclosure process in accordance with the present invention.

FIGS. 46-48 are user interface displays for a technical paper approval process in accordance with the present invention.

Detailed Description of the Preferred Embodiments

The present invention will now be described more fully hereinafter with reference to the accompanying drawings, in which preferred embodiments of the invention are shown. This invention may, however, be embodied in many different forms and should not be construed as limited to the embodiments set forth herein. Rather, these embodiments are provided so that this disclosure will be thorough and complete, and will fully convey the scope of the invention to

those skilled in the art. Like numbers refer to like elements throughout.

5 An invention disclosure process according to the present invention is implemented in an intranet 10, as shown in FIG. 1. This intranet 10 may be localized within a corporation or business site, or may even be configured to link more than one division of a corporation together. The intranet is separated from the rest of the internet by a firewall, which is a
10 hardware/software combination that protects the intranet from unauthorized user, as readily understood by one skilled in the art.

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A key component of the intranet is an e-mail system and a web browser for implementing the invention
15 disclosure process. The e-mail system may use normal internet e-mail addresses, except that it routes traffic within an organization so the e-mail need not travel outside the intranet. Internal routers 13 and mail servers 15 send the mail to other corporation
20 employees via the intranet. E-mail that travels to and from the internet from the intranet must go through the firewall. The invention disclosure process thus may also be implemented over the internet using an encrypted or secured connection. For instance, remote
25 sites are able to upload information to the intranet database server 10.

E-mail messages are easily transmitted and received between users within the intranet 10 for providing notification and status of a particular
30 invention disclosure. Furthermore, hyperlinks embedded within selected e-mail messages allows a user to access a particular invention disclosure, as will be described in greater detail below.

The intranet 10 offers access only to
35 enrolled or authorized users. That is, each user requires a selected password to match their user name

5 separate database server 16. Alternatively, the web
server 14 and the database server 16 can be formed as a
single server 12, wherein the server would include a
hierarchical tree structure containing files pertaining
to those stored in the database server. The server 12
0 is not limited to any particular operating system for
implementing the invention disclosure process.
Individual computers 18 are connected to the servers
12. In one embodiment, each personal computer 18
includes a web browser since the invention disclosure
5 process is web-based.

25 Whenever a change is made to any of the displays of the invention disclosure forms, these displays are automatically updated by the web server 14 so that each time a user logs into the invention disclosure process, the web server 14 provides the updated pages.

30 Referring now to FIG. 2, a high level flow chart illustrating how an invention disclosure is created and evaluated over an intranet 10 in accordance with the present invention will be described. From the start (Block 20), the primary inventor creates an invention

disclosure using a template form provided by the server
12 at Block 21. Once the invention disclosure has
been completed, the primary inventor has a number of
available options which will be described in greater
5 detail below.

One of these options is to share the
invention disclosure with a co-inventor at Block 22.
Selection of this option automatically causes an
electronic mail (e-mail) message to be transmitted
10 notifying the co-inventor to review and comment on the
invention disclosure. The e-mail message to the co-
inventor includes a hyperlink to the newly created
invention disclosure. The co-inventor selects the
hyperlink to access the invention disclosure for
15 review. It is assumed that the co-inventor is an
enrolled or authorized user. In other words, the co-
inventor enters a password recognized by the server 12

Once the primary inventor is satisfied with
the contents of the invention disclosure, the
20 disclosure is then submitted to the server 12 at Block
23. In response, the server 12 automatically creates a
profile of the invention disclosure at Block 24. This
profile is based on the functional and technical area
relating to the invention disclosure. In one
25 embodiment, the profile includes the functional manager
of the primary inventor, an intellectual property
representative (e.g., a patent attorney or a
paralegal), a technical review person, and a contracts
person if the invention was developed under government
30 contract. The contracts person is associated with the
inventor's business and technical areas. The profile
also includes specific information relating to the
primary inventor, such as the inventor's employee
number, department number, building number, phone
35 number and e-mail address. The created profile for the
submitted invention disclosure is automatically stored

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After the invention disclosure has been submitted and profiled, a first notification message is automatically transmitted via e-mail to a first group of users at Block 26. The intranet includes a plurality of users enrolled therein with each user having associated personnel information stored within the intranet. The first group of users are part of this plurality of users.

The first notification message states that the primary inventor has submitted an invention disclosure for evaluation. The first notification message may include a hyperlink to the invention disclosure. In other words, this first group of users are notified of this message. The first group of users is determined based upon the created profile of the invention disclosure document. In one embodiment, the first group of users includes the applicable business area manager, the supervisor of the primary inventor, and the primary inventor and co-inventors.

Simultaneous to creating the first notification message, a second notification message is created. The second notification message includes a
25 hyperlink to the invention disclosure. This second notification message is transmitted via e-mail over the intranet to a second group of users at Block 28. The hyperlink allows the invention disclosure to be viewed by clicking the web browser on the hyperlink. The
30 second group of users are also part of the plurality of users enrolled within the intranet.

The second group of users are determined based upon the created profile of the invention disclosure. In one embodiment, the second group of users includes a technical review coordinator, a contract administrator, and an administrator in the intellectual property department.

The technical review coordinator selects at least one evaluator to review and evaluate the submitted invention disclosure at Block 30. Once the server 12 receives a name of the evaluator, a third notification message is automatically created and transmitted via e-mail to this evaluator at Block 32. The third notification message also includes a hyperlink to the invention disclosure.

Evaluation comments generated and transmitted by the evaluator are provided to the server 12 at Block 34. These evaluation comments can then be reviewed by the technical review coordinator at Block 36. The technical review coordinator makes a final recommendation of the invention disclosure based upon the evaluation comments provided by the evaluator. If the technical review coordinator needs additional information, another evaluator could be selected to review and evaluate the invention disclosure. This final recommendation is automatically transmitted via e-mail to the first and second group of users at Block 38. The invention disclosure process is finished at Block 40.

Referring now to FIGS. 3-44, one embodiment of display formats for the invention disclosure process will be described in detail. These display formats are viewed by the users on their individual computer 18. The actual creation of the display fields within each display will not be described, since the construction of web-based html pages are well known by one skilled in the art.

Since the invention disclosure process is set up within an intranet, security is established as to who can access, review and evaluate an invention disclosure. To create an invention disclosure, the primary inventor first accesses the start or home page,

where the primary inventor will be prompted to enter a user name and password. A subsequent page will provide a list of options to the inventor, as best shown in FIG. 3. In one embodiment, these options include 1)

- 5 prepare an invention disclosure, 2) view prior invention disclosures, 3) committee chairperson review, 4) evaluate a technical disclosure, 5) view patent and disclosure information, and 6) technical author program, as shown in display portion 50.

- 10 To create an invention disclosure, the inventor clicks on the text "prepare an invention disclosure" which causes a display to present a list of options relating to preparing an invention disclosure, as shown in FIG. 4. In one embodiment, these options
15 include 1) create an invention disclosure, 2) add attachments to an invention disclosure, 3) revise an invention disclosure, 4) send an invention disclosure to co-inventors, 5) view unsubmitted invention disclosures, and 6) submit an invention disclosure, as
20 shown in display portion 52. Narrative text to assist the primary inventor is displayed in display portion 54. After the primary inventor selects "create an invention disclosure," a blank invention disclosure form is displayed, as shown in FIG. 5.

- 25 In the invention disclosure form, there are fields to enter specific information. When a primary inventor name has been entered in field 60, this name is compared against a database, such as an employee database. The same process is repeated for entering a
30 co-inventor's name in field 62. The primary inventor also picks a site location in field 64, a functional area in field 66, and enters a title for the invention in field 68. An inventor's full name can also be found by selecting the last name field 72 or department

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number field 74 using a separate display screen, as shown in FIG. 6.

With respect to the invention disclosure form, the primary inventor describes the problem in field 70, and describes the solution in field 76. Other information to be provided includes a series of evaluation questions indicated by fields 78a-78c, as shown in FIG. 7. Keywords and an abstract of the subject matter of the invention are provided in respective fields 80 and 82.

Referring to FIGS. 8 and 9, questions helpful to identifying a possible statutory bar date are answered in fields 84a-84i. In addition, several questions pertaining to establishing if proprietary information is involved is answered in fields 86a-86j, as shown in FIGS. 9 and 10. Contract information type questions are answered in fields 88a-88e to determine if the invention was developed under government funding.

Any of the information required for the invention disclosure as indicated in FIGS. 3-10 can be generated external to intranet, such as with a word processing program, and then imported into the applicable fields. Furthermore, a separate attachment can remain fixed to the invention disclosure if additional information is necessary as will be described below.

Also included within the invention disclosure form (not shown) is a comment section to allow the inventor to expand upon specific questions that may require an additional explanation. Once all the fields have been filled in, the invention disclosure can be saved, as shown in FIG. 11. As previously mentioned in reference to FIG. 3, the primary inventor has a list of options to choose from. These options are again listed

after the invention disclosure has been saved, as shown in display portion 90 in FIG. 11.

The invention disclosure can be modified as many times as necessary before being submitted. As previously stated, one of the options presented to the primary inventor is to revise the invention disclosure, as shown in FIG. 12. Another option is to send the invention disclosure to a co-inventor, as shown in FIGS. 13-14. This notice is sent via e-mail to the co-inventor and includes a hyperlink to the invention disclosure, as shown in FIG. 15. The co-inventor must enter his user name and password before viewing the invention disclosure.

Yet another option available to the primary inventor is to include an attachment. Attachments, such as word documents, power point presentations, etc, can be attached to the invention disclosure. The primary inventor selects the appropriate option as shown in display portion 90 in FIG. 11 to obtain a display for adding attachments, as shown in FIGS. 16-20. The primary inventor selects a file on his individual computer 18 and uploads the file to the server 12. Attachments can be made until the invention disclosure is submitted.

Comments provided by the co-inventor are sent to the primary inventor. The control is set up for the primary inventor to enter and amend the fields within the invention disclosure form. Once the disclosure has been submitted to the database, it can not be changed by the inventor. If necessary, the IP administrator can change the disclosure.

To submit the invention disclosure, the primary inventor selects the appropriate option as shown in display portion 90 in FIG. 11 to obtain a display for submitting the disclosure, as shown in FIG. 21. Once the invention disclosure has been submitted,

an invention disclosure number is assigned, as shown in FIG. 22.

Sample e-mail notification messages are provided with reference to FIGS. 23-25. For example, sample e-mail messages with the hyperlink sent to the IP administrator and the review committee coordinator are respectively shown in FIGS. 23-24. Similarly, sample e-mail messages without the hyperlink are sent to the functional area manager and the inventor as respectively shown in FIGS. 25-26.

Referring now to FIGS. 27-31, displays are provided illustrating review of the invention disclosure, and selecting an evaluator for the invention disclosure. As shown in field 96 in FIG. 28, the committee review coordinator has the option to assign an evaluator, delete an evaluator, view the invention disclosure, review the technical/business evaluation of the invention disclosure (if already performed), and assign a final recommendation (after receiving evaluation comments). The committee review coordinator assigns an evaluator, as shown in FIGS. 29-30. Once an evaluator has been selected, an e-mail notification message having a hyperlink to the invention disclosure is provided to the evaluator, as shown in FIG. 31.

Selecting from the options field 98 as shown in FIG. 32, the evaluator selects the text "evaluated a technical disclosure form." This causes the technical/business evaluation displays to be viewed, as shown in FIGS. 33-35. Information to be provided by the evaluator includes technical evaluation factors as shown in field 100, and alternatives as shown in field 102. Several business evaluation factors fields are also provided as shown in field 104, followed by a general comments field 106. Once the evaluation form has been filled out, the evaluator saves the form,

which then provides a saved status to the evaluator, as shown in FIG. 36.

In response to the evaluation form being saved, an e-mail notification message is sent to the review committee coordinator, as shown in FIG. 37. Review of the actual evaluation form is viewable by selecting the hyperlink provided in the e-mail notification message. The committee review coordinator selects the committee coordinator review option in field 120, as shown in FIG. 38. The committee review coordinator reviews the same display previously provided for selecting the evaluator. Herein, the committee review coordinator can select review of the completed technical/business evaluation form, as partially shown in FIG. 40. The committee review coordinator then assigns a final recommendation selecting from search, publish, close, or protect as a trade secret, as shown in FIGS. 41-42.

After the committee review coordinator selects the recommendation, an e-mail notification message is sent to the IP administrator and other applicable personnel, as shown in FIG. 43. These other personnel include the first and second group of users as described above. The first and second group of users are determined based upon the created profile of the invention disclosure. In one embodiment, the users include the applicable business area manager, the supervisor of the primary inventor, the primary inventor and co-inventors, the technical review coordinator, and a contract administrator if the invention was developed under a government contract.

Other functions available within the invention disclosure process includes viewing prior invention disclosures, as shown in FIG. 44, and updating functional area information, as shown in FIG. 45. In addition to distributing an invention disclosure over the intranet as just described, a

technical paper approval process will be now be described with reference to FIGS. 46-48. The technical paper approval process is similar to the invention disclosure process and can be accessed from the
5 invention disclosure process, as shown in field 50 in FIG. 3.

The technical paper approval process is similar to the invention disclosure process because e-mail notification messages with hyperlinks to the
10 technical paper are used to complete the approval process. Because the intranet is a limited access system requiring each user to be enrolled in the intranet, electronic signatures are acceptable for this approval process.

15 The technical paper approval process is used to approve the external and internal release of technical papers, abstracts, presentations, reports, journals articles, books, and other information intended for publication or presentation outside of a
20 particular corporation. In addition, technical papers related to projects that were funded under government contracts require government approval before initial publication. In other words, release approval is required each time information is to be presented by an
25 author, particularly within a large company.

The technical paper approval process helps to speed up the time normally required to obtain approval, particularly when a half a dozen or more people have to review and provide comments as to whether the technical
30 paper can be released. The author of the technical paper first accesses the home page of the technical paper approval program. In one embodiment, the author enters information such as the title of the paper, classification, and type of paper, as best shown in
35 FIG. 46. The author also enters his name, employee number, internal address, telephone number, and e-mail

address. If there is a second author, the same fields are also to be filled in for the second author.

If the paper is to be presented at a conference, specific information is to be provided by the author, as indicated in FIG. 47. The author is also required to identify a technical peer reviewer. If the technical paper relates to a government contract, an invention disclosure, a patent or any unique concepts, then specific fields are to be filled in by the author, as indicated in FIG. 48. Once the fields in FIGS. 46-48 have been filled in, e-mail notification messages having hyperlinks to the technical paper are provided to the appropriate personnel required to review the technical paper. The technical paper is included as an attachment to the technical paper form filled out by the author.

In one embodiment, company personnel required to review the technical paper includes the author's manager and project manager, a technical reviewer, and a reviewer from the intellectual property department. Other reviewers include a security person to review if the information is classified, a communications person to see if format and grammar is correct, and an export/import person who typically sends the paper to a government agency for approval if it actually contains sensitive technical data.

An advantage of the technical paper review process is that the author does not have to walk around with a paper copy of the technical paper and confront each person required to review the paper before it can be presented or published. The intranet approval process significantly speeds up the approval process. Furthermore, the author has the ability to status whether a reviewer has signed off or not. Another advantage of the technical paper process is a delegate feature, wherein a backup or alternate reviewer can be

In addition to distributing either an invention disclosure and a technical paper over the intranet as just described, a confidentiality agreement or a proprietary information exchange agreement (PIEA) approval process for contracts can also be implemented over the intranet. This process is applicable to any confidential information that is to be exchanged between corporations. This process establishes an agreement between the corporations stating the terms and conditions of the exchange.

The confidentiality agreement approval process is thus used to approve the release or exchange of confidential or proprietary information with another corporation. However, before any such information can be released or exchanged, an agreement or contract defining the terms and conditions must first be signed between the parties. The confidentiality agreement approval process advantageously speeds up this process by sending e-mail notification messages to the appropriate personnel to review the information to be released. The e-mail message includes a hyperlink to the confidentiality approval form containing the terms and conditions of the information to be released. The actual contract is included as part of this process.

The user desiring to release the confidential information or to receive confidential information from

another corporation accesses the home page of the confidentiality agreement approval process and enters information with respect to the parties involved, along with a brief description of the information. This
5 brief description also describes the initial terms and condition pertaining to the release or exchange of the information.

As part of the process, there are two options to obtain a confidentiality agreement approved by key
10 personnel within the corporation. One option is to select a default approval list based upon a profile of the person submitting the request. The second option is to tailor a selected approval list. Depending on the level of the user, different management, contract
15 and legal personnel can be selected or replaced with respect to the default list.

Once the approval list is selected, an e-mail notification message is transmitted to the appropriate personnel to review the proposed agreement. Other
20 options are also available for the reviewer, such as a manager requesting that certain members of his staff review the agreement before he signs off approving the agreement. All the comments and approvals are received by a business personnel responsible for incorporating
25 all the comments into the final agreement. Afterwards, the two corporations can sign the agreement.

An advantage of the confidentiality agreement approval prevents the user desiring to release the information from having to walk around with a paper
30 copy of the exchange agreement and confront each person required to review the agreement before it can be submitted to the other corporation. The intranet approval process significantly speeds up the approval process. Furthermore, the user has the ability to
35 status whether a reviewer has signed off or not.

The intranet system used to implement the invention disclosure process can also interface with a

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docketing database system, such as the program sold by Computer Packaging in Rockville, Maryland. More particularly, the profile information entered into the database server by the inventor when the invention disclosure is created is also provided to the docketing database. The information pertaining to the profile (e.g., critical date information, contract information, reduction to practice information, etc.) Of each invention disclosure is provided to the docketing database. The docketing database can then be used to set schedules and/or various events in the invention disclosure process.

The technical paper approval process and the confidentiality agreement approval process can also interface with the docketing database. For example, the publication date of a technical paper may set a bar date for the filing of a patent application. Consequently, this information will be entered into the docketing database. Likewise, a potential on-sale bar date may be generated as an agreement generated by the confidentiality agreement process.

As discussed above, the invention disclosure process may also be implemented over the internet using an encrypted or secured connection. For instance, remote sites are able to upload information to the intranet database server 10 and the docketing database. The transmittal of classified papers may also be exchanged over this secured connection.

Many other modifications and other embodiments of the invention will come to the mind of one skilled in the art having the benefit of the teachings presented in the foregoing descriptions and the associated drawings. Therefore, it is to be understood that the invention is not to be limited to the specific embodiments disclosed, and that modifications and embodiments are intended to be included within the scope of the appended claims.